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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/652,813 | 08/29/2003 | Chi-Tang Ho | 03-40155-US | 2476 |

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EXAMINER

WITHERSPOON, SIKARL A

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/652,813

Applicant(s)

HO ET AL.

Examiner

Sikarl A. Witherspoon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-25, 27-44 and 46-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-25, 46 and 47 is/are allowed.
- 6) ☒ Claim(s) 27-44 and 48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

The examiner has considered applicants' amendment filed August 3, 2005; the amendment was sufficient to obviate the rejection of claim 45 under 35 U.S.C. 102(b). However, the examiner is now making the following new rejection, and as such, the finality of the previous office action has been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-44 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodsall et al (6,482,450) and further in view of Goodsall et al (US 6,113,965).

The instant claims are drawn to a process for preparing a benzotropolone derivative by reacting a molecule comprising a pyrogallol unit with a molecule comprising a catechol unit, in the presence of a peroxidase and hydrogen peroxide. Subsequent limitations are drawn to specific reactants employed in the process.

Goodsall et al ('450) teach that degallated catechins and gallic acid that have been liberated from tea leaves by treatment with tannase can be reacted in the presence of hydrogen peroxide, which activates natural peroxidase found in the tea, to produce a benzotropolone compound. For example, epicatechin and epigallocatechin

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are reacted to form theaflavin (col. 3, line 55 to col. 6, line 16). Table 6, found at column 12, discloses catechins and theaflavins.

The difference between Goodsall et al ('450) and the instant claims is that ('450) does not expressly teach which combination of catechins react together, or with gallic acid, to produce a specific theaflavin compound; the patent is only specific with regard to the reaction of epicatechin with epigallocatechin to produce theaflavin.

However, the ('965) patent to Goodsall et al discloses catechins in figure 1, and the combination of catechins reacted to form the corresponding theaflavin compound. The instant claims are therefore rendered obvious in view of the two cited references, since the ('450) patent teaches the reaction of catechins (i.e., epicatechin and epigallocatechin) in the presence of hydrogen peroxide and a peroxidase to produce the corresponding benzotropolone derivative, and the ('965) patent discloses theaflavin derivatives made by reaction of the respective catechins. It would have been obvious to a person of ordinary skill in the art, at the time the present invention was made, to combine the reference teachings, such that a person of ordinary skill in the art practicing the condensation process taught in the ('950) patent would be able to produce other theaflavins, being given the combination of catechins required, from the ('965) patent.

The following is a statement of reasons for the indication of allowable subject matter: claims 2-25, 46 and 47 are drawn to benzotropolone derivatives that are neither taught nor fairly suggested by the closest prior art of record. The composition

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comprising said compounds and methods of using them are therefore unobvious in view of the prior art.

The examiner would like to direct applicants' attention to page 9, second paragraph of the remarks filed with the amendment of August 3, 2003. The second paragraph states that claims 8 and 9 are cancelled; however, these claims were not cancelled, but were amended.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikarl A. Witherspoon whose telephone number is 571-272-0649. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S.A.W.


SIKARL A. WITHERSPOON
PATENT EXAMINER